THE JOURNAL OF SCHOOL HEALTH

VOL. VIII NO. 4

APRIL
1938

DR. EVERETT C. JESSUP,
ROSLYN, L. I.
NEW YORK

PUBLISHED BY
THE AMERICAN SCHOOL HEALTH ASSOCIATION

THE JOURNAL OF SCHOOL HEALTH

Published monthly, except July and August, at Buffalo, N. Y.

Editor
CHARLES H. KEENE, M. D.
3335 Main Street, Buffalo, N. Y.

Assistant Editor
EARL E. KLEINSCHMIDT, M. D.
Ann Arbor, Michigan

SUBSCRIPTION RATES TO THE JOURNAL

Membership dues, $2.00, including $1.50 subscription. Subscription $1.50.
Single copies 25c

Address all communications to
THE EDITOR, 3335 Main Street, Buffalo, New York

AMERICAN SCHOOL HEALTH ASSOCIATION

Organized 1927

Devoted to the interests and advancement of those engaged in school health activities and the services rendered by them.

Officers of American School Health Association

President:
John Sundwall, M. D., University of Michigan, Ann Arbor, Michigan
President-Elect:
Harold H. Mitchell, M.D., Department of Health, New York City
Vice-Presidents:
James F. Rogers, M. D., Office of Education, Washington, D. C.
Fredrika Moore, M. D., State Department of Health, Boston, Massachusetts
Executive Secretary and Treasurer:
A. O. DeWeese, M. D., Kent, Ohio
Editor:
Charles H. Keene, M.D., Buffalo, N. Y.

GOVERNING COUNCIL

Term Expires 1938

Edna Bailey, Ph.D., Berkeley, Calif.
A. L. Beaghler, M. D., Denver, Colo.
F. E. Harrington, M. D., Minneapolis, Minn.
V. K. Volk, M. D., Saginaw, Mich.

Term Expires 1939

Helen Ahrens Cary, M. D., Portland, Ore.
Dorothy Deming, R.N., New York, N. Y.
Sven Lokrantz, M. D., Los Angeles, Calif.
W. A. McPheeters, M. D., Goldsboro, N. C.
Lon Morrey, D.D.S., Chicago, Ill.

Term Expires 1940

J. L. Bowman. M. D., Montgomery, Ala.
John E. Burke, M. D., Schenectady, N. Y.
Allen G. Ireland, M. D., Trenton, N. J.
Charles L. Outland, M. D., Richmond, Va.
John T. Phair, M. D., Toronto, Canada

Affiliated Associations
Don W. Gudakunst, M. D., Michigan Ass'n, Detroit, Mich.

THE JOURNAL OF SCHOOL HEALTH

Vol. VIII APRIL, 1938 No. 4

CONTENTS

Practical Procedures in School Health Service 91
Dorothy B. Nyswander, Ph.D.

Education of the Handicapped Child 99
Bronson Crothers, M.D.

Who Shall Administer School Nursing? 102
Public Health Nursing

Suggested Regulations for Lighting Sight-Saving Classrooms 105

Editorials 110

Abstracts 112

Notes 119

Meetings 120

Published by
THE AMERICAN SCHOOL HEALTH ASSOCIATION
3335 Main St., Buffalo, New York
Editorial Office, 3335 Main St., Buffalo, New York

Copyright April 1938, by
The American School Health Association

Entered as second-class matter at the Post-Office at Buffalo, N. Y.
October 5, 1937

Have you tasted PABLUM? Recently?

A FAMOUS CHEF HAS SAID, "Unless you season your food *when you cook it*, you can never prepare the perfect meal. You should let the seasoning cook with the food; you can never season properly *after* it is cooked."

Housewives with a reputation for culinary skill agree that the simple procedure of adding salt during the cooking process makes most food taste better than if salt is sprinkled on haphazardly at the table.

It has been found after considerable experiment in the Mead Johnson Research Laboratory that when 1% sodium chloride is added to Pablum *during* the patented steam-pressure cooking process, the delicious flavors of the cereal grains are developed to the full.

Flavor is a matter of habit, and many physicians have observed that when Pablum is fed at at an early age (about the third month) the infant not only likes Pablum but vigorously refuses other cereals. Pablum has a delicacy and savor unique among cereals. It appeals even to the temperamental appetites of sick children and convalescents. Flavor is such an ephemeral element that it may be necessary for the mother to try preparing the child's cereal in various ways until she discovers one that pleases most.*

Palatability is not the only reason why physicians recommend Pablum. Offering the unusual combination of a delicious food rich in iron, it has special value in nutritional anemia (while improving the flavor of Pablum we have also increased the iron content to 0.03%, each ounce supplying 8½ mgms.). In addition to iron, Pablum is rich in calcium and phosphorus and contains vitamins B and G.

**Hot or cold, Pablum makes a delicious breakfast dish that can be prepared in a minute simply by adding cream, milk or water of any temperature. More than that, it can be served in many varied ways to intrigue the whimsical appetite — in muffins, mush, puddings, junket, fruit bars, beverages, etc. May we send you recipes and samples of Pablum?*

●

Pablum consists of wheatmeal, oatmeal, cornmeal, wheat embryo, alfalfa, yeast, beef bone, reduced iron and sodium chloride.

MEAD JOHNSON & COMPANY

Evansville, Indiana, U. S. A.

Please enclose professional card when requesting samples of Mead Johnson products to cooperate in preventing their reaching unauthorized persons

THE JOURNAL OF SCHOOL HEALTH

Devoted to the interests and advancement of school health service and instruction. Your participation by membership is solicited.

Vol. VIII APRIL, 1938 No. 4

PRACTICAL PROCEDURES IN SCHOOL HEALTH SERVICE* †

DOROTHY B. NYSWANDER, PH.D.

Director of the School Health Study, Committee on Neighborhood Development, New York, N. Y.

How does an executive of any organization, public or private, find out whether his department is doing an effective job? This is a practical inquiry. Complacency and self-congratulation have little place in modern administrative jobs. The administrator must know to what degree he is successfully reaching his objectives. The question is—how to make the evaluation.

If the organization is large the executive has many departments. Each of these during the course of time has built up files filled with executive orders, statements of policy, bulletins, and manuals. These materials, each in its own special time, met a certain need. Many of these needs, however, belong to the past, for new concepts, new theories of procedures, new technics, and new social forces have been introduced into the picture.

Besides the handicap of outmoded regulations, there is the handicap of the attitudes of the staff for whom these regulations have become "sacred cows." Often, unfortunately, the "sacred cows" of the various departments are tethered in widely separated fields. It becomes administratively difficult and expensive to give them the care they constantly need for survival. The executive of the division cannot keep watch over them. It is impossible for him to see that their services are no longer valuable and that their maintenance is depriving his modern organization of the sustenance and energy necessary to do the job.

He knows that a well trained staff and good physical equipment make for effective service. The executive in the field of education is aware, however, that good teaching is not synonymous with authors of text-books or marble halls and stadiums. Nor is superior performance in public health necessarily associated with high-powered publicity, expensive clinical equipment, elaborate statistical records, or vast numbers of personnel. The test

* Read before the Child Hygiene Section of the American Public Health Association at the Sixty-sixth Annual Meeting in New York, N. Y., October 8, 1937. Reprinted with permission from the American Journal of Public Health, March, 1938, page 334.

† This study is sponsored by the Department of Health and the Department of Education. Its direction and administration are under the School Health Study Committee of the Committee on Neighborhood Health Development.

of an organization's efficiency lies in its total effect upon the end product. In education and public health the test lies in the degree to which changes in a positive direction have been made in the behavior of people.

If the administrator feels that his department is not effecting such changes, he wants to know why. Is it because of poorly trained personnel, lack of personnel, lack of facilities, or because the mechanics of the administrative system itself are so permeated with tradition and imperfections that neither personnel nor facilities can function?

Consider now the specific problem of investigating the effectiveness of the school health service. (For our purposes, it matters little whether that service is furnished by the department of health or the department of education.) The administrator responsible for the service is confronted by the fact that he has at least five professional groups involved, each under its own professional leadership. These are the school physicians, the school nurses, the clinic personnel, the teachers, and the private physicians. Where shall he start?

Several courses are open. He may call in an expert to make a survey. He may use the School Hygiene section of the A.P.H.A. Appraisal Form* to determine the degree to which the service is meeting certain standards. He may make a statistical comparison between the school health activities of his city with those of other cities. He may ask his superiors to give him data from which new policies may be evolved. Any one of these methods gives the administrator needed information and is certainly far better than making no attempt at self analysis. They have, however, serious weaknesses.

First of all, the use of any of these methods fails to go below the surface of operations in the school health field.

Second, the validity of oral or written reports obtained from the supervisory staff is questionable. The reports are vitiated by complex psychological factors, common in this situation, such as (1) the desire to make a good impression; (2) the belief that the service actually is functioning as represented although no check has been made; (3) "wish fulfillment" which operates in such a way that desiring a given result and stating it as having been accomplished become identical in the mind of the person questioned; (4) "defense mechanisms" whose automatic functioning serves to preserve the *status quo* and to keep the "sacred cows" unharmed.

A third weakness lies in the unreliability and lack of usefulness of certain statistics in the school health field. Studies by the American Child Health Association show that physicians markedly disagree in their diagnosis of tonsil defects. The number of malnutrition cases found depends on the procedures used in examination and on the attitudes of the medical director.

* Appraisal Form for City Health Work, Committee on Administrative Practice, American Public Health Association.

Figures on dental defects and their corrections are usually useless. Only when the original recordings are the result of a careful dental examination, and each child is seen repeatedly during a year can a true picture be obtained of the service being rendered. Even when the statistics are reliable they may not give the administrator the desired information.

The director of a division of school nursing may be interested in the average number of home visits made by a nurse during a given period, but she and the administrator rightfully raise the question "How valuable in changing health behavior were these visits?" Statistics do not answer this question. Statistics may show that a school physician examines 15 children or 50 during a morning. Neither figure gives the medical director or the administrator insight into the value of the medical services rendered or the type of educational job done with teacher, nurse, and parent in getting the child on the pathway to correction. In other words the statistics usually obtained, although useful for general administrative purposes, fail to reveal either the quality of work done or the specific places where the complex administrative procedures fail to function effectively.

There is, however, another method available to the administrator, one that will give him information basic to developing a school health service in which medical, nursing, and educational staff can carry out the best modern theory and practices known in the school health field. This, for the lack of a better name, may be called the method of "administrative research." It is administrative in that it concerns itself only with problems whose solutions have direct bearing on the functioning of the service. It is research in that the methods employed in solving the problems are frankly experimental and that recommendations made to the administrator are outcomes of problems discovered, analyzed, and given trial in the field.

The larger the organization the more important it is that someone capable of independent and impartial judgment be detailed, not in the central office, but on the firing line to observe what is actually taking place, to sense the gaps and the impractical. Here is the place to work out smooth functioning. The administrator—whether director or supervisor—is usually pretty well occupied in keeping the engine running. He has neither the time nor the opportunity to delve or to cut and try. These opportunities for administrative research within the growing organization are believed to have practical values that equal the demonstrations of new activities.

This "administrative research" method is being tested at the present time in New York City for its effectiveness in aiding the Department of Health and the Department of Education to evaluate the present school health service and to develop a better one. One health district has been designated as an experimental area for this purpose. Here studies are made, procedures are put on trial, and results are evaluated. The assistant superintendent of

education for the area, the director of health education, the directors of the nursing and school hygiene bureaus, the director of district health administration and their respective field supervisors act in the capacity of advisers and censors. They suggest or approve problems to be studied; they make administrative shifts in procedures and policies that the experimental work may proceed; they consider the significance of the results of the experiments and, when conclusive, incorporate them in remaking city-wide policies. The entire value of the study depends upon the degree to which individual administrators of the divisions of the service are given aid in solving their own administrative problems.

This study in "administrative research" has been planned for a period of 4 years. In a school health service of the proportions of New York City this period is not long enough in which to explore and test the many phases of the work. One year of the 4 has passed. Examples of the problems studied and recommendations made during this period will serve to give an idea of the types of services this approach affords.

To learn, first of all, how existing school health records were being used was the first problem of the study. The monograph, "Physical Defects—The Pathway to Correction,"[1] states that "all health records must be vital." By this is meant, records which are accurate, cumulative, and subject to interperetation by teachers and nurses. Present and future medical attention for any child depends on such records. So does the much talked of rapport between teacher and nurse, rapport between nurse and parent, and between school physician and private physician. Poor records and lack of records mean poor service and lack of coordinated service.

The exploratory work on the problem of records was confined to one large school in the experimental area. Samples were taken of all available health and medical records for the following grades—kindergarten, 2nd, 5th and 7th. The analysis of the records revealed answers to the questions: (1) How complete are the medical files for children now in school? (2) Is the system now being used efficient in transferring school medical records from school to school for the constantly moving school population? (3) Do teachers and nurses in their separate reports indicate that they individually or together are following up defects for the same children? (4) Are the dental, eye, and cardiac clinical records entered on the regular school health records? (5) What use is made by the medical staff of teachers' written observations or reports on health conditions? (6) What use is made by the teachers of the medical records kept by the school medical staff? (7) To what degree do the medical cards give *differentiated* or *individualized* recommendations as to the "follow-up" procedures to be used? (8) Are the entries on the cards readable and understandable by nurse and teacher?

It had been assumed that records followed a child from one school to another when he moved. Actually, it was discovered on investigation that a surprisingly large number of record cards did not move on, but died in a terminated file in the last school attended. And in some schools from 30 to 50 per cent of the pupils move annually. This situation called for a simple yet laborious job of revamping the files for ready reference and devising a practical plan for moving cards along with the children. This involved (1) providing a cumulative health record card for every child, which would go with him into the secondary schools; (2) instituting a more precise and accurate filing system of medical cards so that teachers may have available at any time the medical records for their grades; (3) sending the medical cards at the beginning and end of each term to the classroom teacher that she may be aware of the health problems known to physician and nurse, and that she may note on the card the grade and room to which the child is being transferred.

Serious lack of agreement in the knowledge of defects between teacher and nurse was revealed. Independent action was being taken on the same child. An experimental study was started immediately to determine the best way to coördinate this knowledge. The Department of Education in New York City has for many years asked its teachers to report twice yearly concerning the physical defects of the children. This report is made on a Health Day sheet. In the experimental school this Health Day Sheet was changed so that teachers, instead of reporting *diagnoses* of defects, reported on the presence of ***behavior symptoms related to health.*** Pediatricians believed these symptoms would furnish important case history data to the physician making the diagnosis. To evaluate the teacher-references on this new basis and to test the value of the individual symptoms reported by the teacher became a major project. Eight classes comprising 300 children were selected for the evaluation. The results showed that teachers did not "swamp" the medical office with children. They referred children for medical attention who needed it. Only 10 per cent of those referred were found by the physician to have no defects. The error of reference lies in the cases *not referred* for medical attention. Of the 100 children in this group 25 were considered by the examining physician to have some defect meriting immediate attention. Further checking during this next year will show whether or not the defects of these 25 children would be lost from sight altogether by this reference method or whether they would come to attention later through referrals by subsequent teachers.

The experimental evaluation showed too the weaknesses of the various symptoms on the Health Day Sheet, and indicated specifically where stress

must be placed in developing a new Health Day Sheet and in educating teachers to its use.

The study had less objective results but equally important ones. It showed that in using the teacher as a primary screen, (1) knowledge and reports of defects by teachers and medical staff become identical; (2) the physician has a personal professional interest in the child examined because he feels that a *need* for the examination has been expressed; (3) an avenue is opened wide by means of which the school physician and the school nurse may, through their subsequent conferences with the teachers, instruct her in making more valid health observations of her children, inform her as to the recommendations made to the parent concerning each defect; and gain her coöperation. In addition, these same conferences serve the purpose of bringing to the medical staff the instruction it needs in becoming aware of the emotional, social, and educational life of the child. Such information is necessary if the school health service is to meet the objective of really educating child and parents. This objective must not be neglected nor ignored.

Plans for next year call for an extension of these procedures with the new Health Day Sheet to 7 other schools differing widely in economic status. Each of these schools offers different administrative problems affecting the objective of bringing the teachers and medical staff into a close working relationship. Not until such testing is done can recommendations for administrative changes be made.

Minor investigations were made of the efficacy of various notes embodying requests to parents concerning the child's health. It is generally agreed that placing a child, when possible, under the supervision of the family physician is a desirable objective of the school medical service. In the usual program the administrator formulates a letter urging the parents to have the child examined by the family physician. This letter may or may not be successful. Experimental work with different types of letters showed that whereas 15 per cent of the parents complied with the request for one type of letter, 65 per cent complied with another type. Similarly a good health service implies that the presence of the parents is desirable at all medical examinations given in the school; it further assumes that in many situations parent-nurse conferences in school are more satisfactory than nurse home visits. After trying out several types of notes to parents urging them to be present at the examination or to come to the school for a conference, two were selected. One of them brought 50 per cent of the parents to the school for the examination; the other succeeded in bringing 75 per cent of those not attending the examination to the school for conferences. Thus, with approximately 85 per cent of the children examined in school, immediate contacts were made with the parent in initiating remedial work for the child.

It has been assumed that certain routines when followed by a dental hygienist bring results. No measures of the amount of effort to achieve these results have been made in earlier studies. In order to estimate this effort, two hundred 7th grade children were selected for a study. The following routines were carried out in the order given. First, the child's teeth were examined and a notice was sent to the parents; the child was then seen by the dental hygienists three times at regular intervals to ascertain what was being done; next a special request was sent to the parents urging them to come to the school for a conference; finally, the child was referred to the assistant principal. Any child placed under dental care at any one stage of the routine was naturally not carried through the other stages. Detailed records gave a measure of the amount of effort required to get a child's teeth corrected or under treatment. The study gives, too, an index of the problems encountered with children who failed to place themselves under treatment even when all of the above "follow-up" technics were employed.

A school health program always includes "follow-up" procedures. These may be of several types, such as conferences with parents at school, home visits, notes sent home, and instructing and re-checking the child in school. How effective is any one of these methods for a special type of defect? To answer this question, at the conclusion of the year a study was made of the 2,400 medical records in the experimental school to find out the *types* of "follow-up" work done with parents and child by physician and nurse which had least success in getting medical attention for the child. Considering each defect separately, an analysis of the "follow-up" work shows immediately that certain procedures bring few if any results, and that "follow-up" policies must be different for different defects. Experimental work during the coming year will furnish answers as to what these procedures should be.

Even in the simple problem of getting Mary Smith to the dentist at least seven people are usually involved—the school physician, the school nurse, the teacher, the two parents, the private dentist, and Mary herself. And the number of interrelationships between these people is many more than seven. It is only when a realistic attitude is taken toward complexities such as these, so that these interrelationships are recognized and appreciated, that Mary Smith will finally get her teeth filled, her glasses re-checked, and eat her breakfast before running to school. To demand efficient functioning of these detailed steps for one Mary Smith may seem too meticulous. It is indispensable for good administration when there are thousands of Mary Smiths.

Certainly, then, the complexities of the school health program suggest that no scheme conceived in *a priori* fashion will work satisfactorily when it is put into operation. Here as in other complex problems of social welfare in which many different people work, many different agencies are concerned,

many different types of people are to be served, the job calls for developing the program from the ground up, not from the top down. There is room for much more study of what may be called "internal management" within the school health service. This type of activity may be the best means of meeting some of the shafts of criticism that have been directed against the school health service.

1. Physical Defects—The Pathway to Correction. American Child Health Association, 1935.

* * * * *

Behavior of Children.— To observe the effect of benzedrine on the behavior of children, Bradley* selected thirty patients, already in the hospital, suffering from behavior disorders. Every child in this group had already been under observation for at least a month. In addition to routine observation and recording of behavior by ward nurses and teachers, each child was observed for three weeks by a special psychiatric nurse. During the second week of observation a daily dose of benzedrine was administered to each patient on arising. Later the records of his behavior during this week were compared with those of the week prior and the week following. The most spectacular change in behavior brought about by the use of benzedrine was the improved school performance of approximately half the children. These patients were of good intelligence and were receiving adequate attention for any personality disorders that might affect their school progress. The other children of the group did not show this striking response in school, but most of them responded in other ways to the medication. Only half of the group showing favorable mood changes shared to a notable degree in the school improvement, especially in arithematic performance, since speed of comprehension, degree of accuracy and quantity of output were all favorably affected. It appears paradoxical that a drug known to be a stimulant should produce subdued behavior in half of the children, but it should be borne in mind that portions of the higher levels of the central nervous system have inhibition as their function, and that stimulation of these portions might produce the clinical picture of reduced activity through increased voluntary control. In spite of the results obtained, it seems wise to await more complete knowledge of the action of benzedrine before recommending its clinical use in behavior problem children. The drug should be administered only by the experienced physician trained in child psychiatry.—*Behavior of Children Receiving Benzedrine. C. Bradley, East Providence, Rhode Island. P. 577. Journal, A. M. A., February 5, 1938, P. 467.

EDUCATION OF THE HANDICAPPED CHILD*

BRONSON CROTHERS, M.D.
Children's Hospital, Boston, Mass.

The term handicap at once suggests disease or disability, and tends to establish medical control. On the other hand, education suggests the orderly development of assets, and teachers are necessarily looking at what is left rather than what is gone. There is no possible use in a discussion, unless it is recognized that training of doctors is very different from that of teachers, and that effective coöperation is dependent on understanding of necessarily divergent attitudes.

For the purpose of this discussion, the term handicapped is limited to the group of children with disabilities dependent on damage to the motor machinery of the body; in other words, the group which is frequently referred to as the cripples. This definition leaves out of consideration the blind, the deaf, and those whose disabilities arise from disturbances of mental and emotional equipment.

Everyone of this restricted group comes first under medical scrutiny, so that the doctor's decisions and his attitudes are of enormous importance. It seems to me very clear that the medical attitude at the start is one of the things which influences the whole educational process, and some understanding of it must precede further discussion.

Traditionally the physician tries to arrive at a clear understanding of the following aspects of a case.

1. The status of the child at the time of examination. Primarily this is expressed in terms of deficit. This insistence upon deficit or disturbance, either anatomical or physiological, is entirely inevitable and correct, since it leads to decision as to whether the process causing the difficulty can be arrested or its effects can be corrected. Furthermore, the appraisal of deficit leads to proper classification or "diagnosis."

2. A search for the cause is made. This is the "etiology" of the medical vocabulary.

3. The ordinary course of the disease or the ordinary effect of deficit is then considered in terms of "prognosis."

4. Treatment designed to control an active disease or to ameliorate the disability is finally considered.

On the whole the doctor is discharging his most obvious responsibility when he has competently appraised and managed deficits. The problem is then frequently handed over to a new group, who attempt to develop the remaining assets.

Efficient teamplay between doctors and teachers is possible even under these conditions, if it is possible to arrive at a valid residue by an agreed formula. For instance, it is quite possible to carry on education of a child

* Read at a Joint Session of the Child Hygiene and Public Health Nursing Sections of the American Public Health Association at the Sixty-Sixth Annual Meeting in New York, N. Y., October 7, 1937.—Reprinted with permission from the American Journal of Public Health, March, 1938, page 340.

whose right arm is completely disabled by infantile paralysis. The psychological integrity of the child and the efficiency of the remaining limbs can be assumed. The industrial effectiveness of the assets and liabilities can be appraised, and no confusion exists.

The difficulties pile up rapidly, however, when the medical appraisal is either inadequate, or is not easily translated into terms of remaining assets. The doctor must deliberately attempt to add a very difficult section to his formulation. He must, I think, try to define the remaining assets so that the psychological and physiological remainder will be understood by those who are responsible for education.

Fortunately, the problem of infantile paralysis lends itself to accurate study. Essentially, the disability is due to the subtraction of a certain number of units of motor function from a known total of identical units. The deficit can be calculated and the remainder obtained by the familiar process of subtraction. By development of remaining muscular tissue, by substitution of apparatus for lost fibers or by fixation of joints, a maximal efficiency can be reached. The fact that infantile paralysis is common and that the medical deficit is easily translated into terms of educational assets, leads, I think, to a feeling that the same process can be applied with equal effectiveness all along the line.

There is a second group, fortunately less common, where a disease, in the ordinary sense, is still active. Certain children have, for instance, tuberculosis of joints. Here the motor disability is only one factor. It is impossible to deal with the child on any basis which assumes that the balance-sheet is more than an expression of opinion concerning the immediate status. Obviously, the responsibility of the physician is continuous, and the teacher is unable to work out long-time plans with any security.

A third group, fortunately still smaller than the last, have remorselessly progressive disease. The child with progressive distrophy, for example, has constantly decreasing assets. There is no confusion since again the conclusions of the doctor as to increasing deficits are easily understood.

The next group, which is relatively large, is much more difficult to manage. Injuries or disease of the brain, with consequent disturbance of motor control are not uncommon. Cerebral palsy is perhaps as useful a name as any for this group. In general, the cause is a diffuse abnormality of the brain due to various causes of which injury at birth is probably the major one. For obvious reasons, it is desirable to ignore in the discussion two major groups—first, those whose intellectual equipment is not adapted to educational procedures, and second, those under continuous medical care because of advancing symptoms.

The children who are relevant suffer, not from isolated abolition of motor function, but from confusion of control of motor function. Obviously,

a mere process of subtraction will not give us a clean-cut picture, even of the motor deficit. The medical formula in terms of anatomical deficit is complicated. The appraisal of physiological disorder is also difficult. In addition there is almost always an intellectual irregularity or deficit. The duty of the doctor seems to me an arduous one. If endless confusion and frustration are to be avoided, he must arrange his material so that his conclusions can be effectively used by parents and teachers. He does not discharge his responsibility until he has indicated the remaining physical and mental assets, suggested a type of training compatible with these assets, and discussed the probable ultimate level of efficiency.

I have no illusions about the difficulties of management of crippled children. Failure of the best known procedures is inevitable in certain cases, but the next step which is being taken in various places is to recognize that the doctors, instead of confining themselves in the appraisal and management of defect, must coöperate with psychologists, psychiatrists, and teachers in formulating a conception of assets. If they succeed they can then coöperate in the planning of an educational routine which will lead toward an attainable goal.

Two equally confusing and dangerous attitudes are common: The irrepressible optimist sees no limits to the spiritual or intellectual achievement of the crippled child; the almost certain result is frustration and disillusionment if remorseless limitations have been overlooked. The pessimist who looks with pitiful despair on the poor broken children, is equally deplorable.

Doctors, teachers, and psychologists ought to be able to define liabilities and assets of individual children, and to get away from generalizations which are inaccurate and misleading. Until such concerted efforts are carried out in all centers for the care of crippled children, we will have no reliable progress. Inspirational talks arouse interest, but furnish no solid basis for adequate educational planning.

• • • • •

Bad Boys?—Far better than to send the unruly child to the principal's office for punishment is to send him to a child guidance clinic which should care for the health, behavior, and achievement of pupils, according to Dr. John Bentley, psychologist of American University, in a discussion of the subject before a Conference on the Exceptional Child. Many factors in the child's home or school life may be responsible for his actions.—Science News Letter. Vol. 31. No. 830. March 6, 1937. P. 155.

WHO SHALL ADMINISTER SCHOOL NURSING?*

A correct answer to the perennial question, "How should school nursing be administered—by the department of health, or by the board of education?" remains to be stated. It would seem that health departments consider that school nursing properly belongs there, while boards of education believe the best ends are served if the nurse is a member of the school system. These conclusions, natural as they are, do not solve the problem for future new services.

The Census of Public Health Nursing made by the National Organization for Public Health Nursing in 1931[1] revealed that 7798 nurses were engaged on either a full-or part-time basis in school nursing; and that 3197 were employed by boards of health and 3003 by boards of education, with 1598 employed by other official and private agencies. However, all of the 3003 nurses employed by boards of education were employed on a full-time basis, while only 1244 were on a full-time school work in health departments. In 1931, then, boards of education employed 1759 more nurses on full time for school health services than did boards of health. Unfortunately, these numbers reveal nothing as to quality or relative values of their work, and are therefore useless in determining which is the better form of administration.

Nor does the *Survey of Public Health Nursing* offer the solution. As the N. O. P. H. N. has pointed out vigorously, it is unwise to draw conclusions on this question from a scoring of 70 visits with health department nurses and 173 with nurses from boards of education. The sample was not large nor representative enough to yield sufficiently reliable data on which to base comparative performance ratings for all the school nurses in the United States.

At the present time, with all the information gathered from the travels, correspondence, office interviews, and committees, the N. O. P. H. N. staff is not in a position to say which type of school nursing administration is better. Our staff has seen good and bad school nursing under both auspices. At present our emphasis is not being placed on administrative set-up. We must have more facts, more studies, more comparable data before we are in a position to make any recommendations as to which department should conduct school nursing. There is much to be said for each method; and even then, circumstances alter cases so that what will work in a county 100 miles square with 40 rural schools will not work in a city of 20,000. Perhaps there can never be a final decision on this point.

---

* An Editorial in Public Health Nursing, March, 1938, pp. 134-136.

1. Census of Public Health Nursing in the United States, the National Organization for Public Health Nursing, New York, 1931, p. 20.

What we can and do say—day in and day out—is that the school nurse in order to perform her special functions needs certain definite preparation for her job over and above her basic nursing education. We believe that she should meet the N. O. P. H. N. minimum qualifications for positions in school nursing no matter where she is working; that local groups interested in community health should know that school health programs will show genuine progress only if properly prepared nurses are appointed. That we have been lax in promoting such qualifications for school positions was all too clearly shown in the sampling of educational qualifications among school nurses, small though it was, in the *Survey of Public Health Nursing*. Something is wrong when in a group of 156 school nurses, 12 had graduated from nonaccredited schools of nursing, 19 had not attended high school, and 106 had had no experience in public health nursing of any kind before accepting the school position. Also, we must admit that adequate preparation for school nursing has not been generally available.

After all, the type of administration of a service is secondary in importance to the quality of service rendered. Much work lies ahead of us. In local, state, federal, and national groups we must work toward the appointment of qualified nurses in school health services. How can we best proceed to do this? We will welcome your suggestions, and in the meantime, we offer a few of our own on which we hope you will send us your comments. We suggest:

1. That your state group (state organization for public health nursing, section of the state nurses' association, or other group concerned with school nursing) work with the state health department, the state department of education, and the state teachers' association in promoting better standards for the appointment of school nurses by supplying all organizations with copies of the N. O. P. H. "Minimum Qualifications for Nurses Appointed to School Nursing Positions" and "Functions in Public Health Nursing";* and also by providing the state public health association with copies of these minimum requirements and functions. We suggest that the matter be brought to the attention of these groups so that members can bring their influence to bear when new appointments are under consideration.

2. That arrangements be made to talk with the state and local parent-teacher associations to see that they, too, have this important information on file; and also that they give opportunities to public health nurses to share in their programs dealing with the problems of health.

3. That an effort be made to secure space in state publications and bulletins reaching the employing group, offering factual material on qualifications for appointments, and on functions. A similar effort might be made to interchange speakers on programs of state conventions.

* See page 113 this issue, Journal of School Health.

4. That where few of the present school nurses are prepared for their positions, a committee of the S. O. P. H. N. or section of the state nurses' association be appointed to study the whole situation, to interest promising nurses in special preparation, and to help nurses already in school positions—through a scholarship fund or otherwise—who want to have further study or observation.

5. That lay sections of committees working in public health programs (for example, the women's auxiliary of the State Medical Association), be informed in regard to the work which is expected of a school nurse and the professional qualifications necessary to carry on her duties.

6. That the state public health nursing group interest colleges and universities in the whole problem, not only with a view to offering vocational guidance to undergraduate students planning to enter nursing, but also with relation to planning courses in health education and school administration for graduate nurses as a part of public health nursing curricula.

7. That local public health nursing groups work with health and school administrators, health officers, school superintendents and principals, and particularly the members of the local boards of education, on all problems related to the school health program.

8. That instructors of courses being offered school nurses (whether in residence or by extension) be given complete information regarding the requirements recommended by the N. O. P. H. N. and encouraged to offer the same quality of preparation for school nursing as for other special phases of public health nursing.

9. That one or two well organized school nursing services be selected in each state where an observation period can be offered to nurses registered in the general courses, and also to nurses already in school positions who wish to observe good school work and keep in touch with the latest and best methods. It may be that some states will have to develop such centers, but probably others already have satisfactory services to use in this way.

10. That the regular postgraduate courses in public health nursing (if your state has an "approved" course) make a special effort to reach school nurses for enrollment.

To carry out any or all of these recommendations, we suggest that a committee of school nurses (in the S.O.P.H.N., S. N. A. section, or other statewide group) be appointed to plan first steps. We suggest the inclusion on this committee of a school administrator, a member of the school board, a representative of the parent-teacher association, a teacher, a school physician, and such representation from other state groups (including nursing organizations such as the State League of Nursing Education) as will promote interest, understanding, and action in securing better prepared school nurses.

SUGGESTED REGULATIONS FOR LIGHTING SIGHT-SAVING CLASSROOMS*

The sight-saving class presents an appealing opportunity for increasing visual efficiency and ease in seeing through (1) the correction of ocular deficiences, (2) the regulation of visual tasks in accordance with the visual abilities of the pupils, and (3) the provision of adequate light and proper lighting. These are the controllable factors in seeing, and, in this report, certain specifications for the lighting of sight-saving classrooms are presented.

Modern educational methods impose upon the eyes of school children visual tasks which are not only critical, severe and prolonged, but also unnatural. Such tasks are often detrimental to normal adult eyes and are particularly serious to young eyes in a formative period. Obviously, the seriously defective eyes of children in sight-saving classes need all of the assistance which science is capable of giving. Furthermore, it is important to emphasize the fact that the visual tasks of the schoolroom, for these children, will be severe even though ideal conditions are provided.

Size of Classroom.—Though the number of pupils in a sight-saving classroom is usually lower than in a regular classroom, the room should be as large as an ordinary classroom. This is desirable so that the pupils can move around a great deal in order to be able to see to the best advantage.

Orientation.—Because of wide differences in climatic conditions it is impossible to lay down definite rules for the orientation of school buildings that will prove satisfactory in all parts of the state. In addition to those important conditions that are necessary for the greatest ease in seeing, there is need to consider conditions affecting ventilation and the psychological reaction of illumination on the child.

A northern exposure may afford a comfortable, steady light under which to work, but in many places such an orientation of classrooms renders them cheerless in the extreme. In some latitudes, southern exposures may be preferred because of the greater amount of sunlight they make possible, yet the natural illumination from a southern exposure may be so difficult to control that the advantages such an orientation offers may be quite overbalanced by the disadvantages. Researches tend to show that east and west exposures are preferable in some areas since they give a maximum of light with a minimum of glare.

Quality of Lighting.—The quantity of light is by no means the only factor to be considered. The quality of lighting, whether natural or artificial, is of great importance. Distribution of light, diffusion, direction, glare, and color of walls and ceiling, and maintenance all have significant effects on seeing conditions.

*** Adopted by the Ohio State Department of Education. This article is reprinted with permission, from the "Transactions" of the Illuminating Engineering Society, Sept. 1937.**

Glare.—The presence of glare is one of the most common and serious faults of lighting. Glare may be designated as any brightness within the field of vision, of such character as to cause discomfort, annoyance, interference with vision, or eye fatigue. There are two common types of glare—direct and reflected. Both should be carefully avoided.

Direct glare is caused by light that reaches the eye directly from the source of light. It may be experienced when looking at a brilliant, unshielded, incandescent lamp or a comparatively small, bright lighting fixture, especially when viewed against a dark background. Also direct glare is experienced when looking toward windows through which the sun or bright sky is visible or where brilliant sunlight may be seen reflected from buildings or other outside surfaces. Children should not be required to face the windows when they are working or receiving instruction.

Reflected glare occurs when bright images of windows or artificial light sources are reflected into the eyes from walls, ceilings, etc. It often occurs when light is reflected from the surface of glazed paper, glossy desk tops, or shiny blackboards, and results in the concealment of the object viewed.

Diffusion.—Diffusion is important in order to avoid sharp shadows on the work and sharp contrasts of light and shade in the room. The larger the light source area, the softer and less pronounced will be the shadows. Light should be well distributed over the entire room so as to produce reasonable uniformity of illumination at the work places of all pupils.

Colors and Finish.—Marked consideration should be given to the colors of the ceiling and side walls in the classroom. On the large wall areas, buffs with a very little yellow are often used, particularly where the idea of warmth and cheer is to be accentuated. There is some tendency to use the "cool" colors in tints and combinations, predominantly blue or green, since these appear to have a quieting effect, and tend to make a room look larger.

The walls should reflect from 50 to 60 per cent of the light falling upon them. The wall area below the window sills should be of a moderately dark color.

The ceiling color should be very light with a reflection factor of 80 per cent. White or bluish white, very light ivory, or cream are suitable colors.

The use of moderately light colors is suggested for all woodwork. Fairly light-colored, dull-finished working surfaces on desks and tables are recommended.

Flat or matte finish paints and dull surfaced materials should be used on all wall and ceiling areas, including the window and door frames and trim. Shiny or glossy surfaces reflect bright glaring spots of light from the windows or lighting fixtures. Matte finishes diffuse these spots of light and reduce brightness contrasts.

This precaution is important in all schoolrooms because young eyes are particularly sensitive to reflected glare.

There seems to be a mistaken idea that shiny surfaces reflect more light than do duller matte surfaces. Reflection factor depends primarily on color, also, dark-colored surfaces do not necessarily diminish reflected glare. A dark, shiny surface is often more annoying than is a light colored one from this standpoint.

Natural Illumination.—The most satisfactory control of natural lighting, at the present time, appears to be obtained by having at each window two translucent, buff-colored shades in soft finish. It has been found that these are effective in diffusing direct sunlight and in preventing glare. Shades in soft finish will not crack and are easily cleaned. The rollers of these shades are placed at or near the center of the window, one directly below the other, the space between them covered by a V-shaped metal bar. Such shades should be wide enough to prevent streaks of light from entering at the sides. To accomplish this it is usually ncessary, unless the windows are deeply recessed, to fasten the rollers on the bastions.

As specified in the Ohio State Building Code, the glass area of the windows should be not less than 20 per cent of the floor area. Since the best light comes from the top of the windows, in order to insure as much natural light as possible on the far side of the room, no sight-saving classroom should be wider than twice the distance from the floor to a point six inches above the top of the glass in the window.

Unilateral lighting is desirable, as this reduces cross lights and shadows to a minimum.

Minimum of Illumination.—Since the eyes of pupils in sight-saving classrooms are unable to carry their full share of the load of seeing, compensation should be provided in the form of extra illumination. The results of carefully conducted studies and of the best current practice based thereon indicate that the minimum, sustained, operating level of illumination should not be less than 30 foot-candles, with higher values often desirable.

Artificial Lighting.—To maintain good seeing conditions, artificial lighting must be supplied when daylight fails, as on dark and cloudy days. In some localties such deficient daylight conditions prevail for more than half of the school hours during the year. Further, it is not always realized that even on bright days, except for desks very near the windows, levels of illumination from natural lighting of the order of 30 fot-candles, are seldom found in the average classroom; hence natural lighting must be supplemented by artificial lighting. On dark and cloudy days dependence must be chiefly on artificial lighting.

To secure the indicated level of illumination with a minimum of direct and reflected glare, with the light well distributed and diffused and with

harsh shadows eliminated, totally indirect lighting should be used. If a slightly luminous bowl effect is desired for psychological reasons, at least 95 per cent of the light should be directed to the ceiling.

Control.—Wiring and switches should be so arranged that the row of lighting fixtures on the window side and the row on the inner side of the room can be controlled independently.

It is well known that the human eye is not able to judge accurately varying levels of illumination; hence lamps are often not turned on when really needed. The photocell control is being used to turn on or off automatically one or both rows of lighting units when daylight goes below or above the required levels of illumination, thus assuring good light for all students at all times and relieving the teacher of the responsibility.

Blackboards.—I. The large wall area occupied by blackboards is somewhat of a handicap to good lighting and seeing cnditions. The black areas absorb some of the light which would otherwise be reflected to the desks. Shades the color of the window shades are sometimes drawn to cover the blackboards when not in use.

2. For most sight-saving classes blackboards on one side and at the front of the room would provide ample accommodations for the pupils.

3. Special blackboard lighting units are desirable to provide adequate illumination on the blackboards.

Suggested Regulations and Recommendations.—Rule 1. Illumination over the work area shall be maintained during all periods of use at a minimum, sustained, operating level of not less than 30 foot-candles. The illumination shall be measured on the working plane, such as the desk or table tops.

Rule 2. Unilateral lighting is recommended. The minimum glass area should not be less than 20 per cent of the floor area. The bottom of the glass shall be at least three feet above the floor and the height from the floor to top of glass, plus six inches, shall be not less than one-half of the width of the room.

Windows shall extend toward the rear of the room at least as far as the front of the last row of desks and well toward the front of the room. No window should be nearer than seven feet to the front blackboard.

Rule 3. Except for desks very near the windows, levels of illumination of the order of 30 foot-candles are seldom found in the average classrooms, hence natural lighting must be supplemented by artificial lighting. On dark and cloudy days dependence must be chiefly on artificial lighting.

Totally indirect lighting, with or without a slightly luminous bowl effect is required. If luminous bowl indirect lighting units are used, not less than 95 per cent of the light output shall be directed to the ceiling.

Ceilings shall be painted a very light color with a flat or matte finish and have a reflection factor of 80 per cent.

Side walls shall have a flat or matte finish with a reflection factor of 50 to 60 per cent.

Rule 4. Lighting, whether natural or artificial, shall be such as to avoid glare, objectionable shadows, and extreme contrasts, and to provide a good distribution of light. In artificial lighting systems, lamps shall be so installed in regard to height, location, spacing, and glassware, reflectors, or other suitable accessories, as to accomplish these objects.

The following recommendations are presented:

1. It is recommended that special blackboard lighting units be installed over all blackboards.

2. Since the eye is a very poor measuring instrument, and since it is essential to be sure that pupils always have adequate illumination and to provide for the most effective control of a lighting system, it is recommended that photocell control be used to turn lamps on and off automatically when daylight goes below or above predetermined levels of illumination.

* * * * *

Mental Defectives and Epileptics.— The Federal Census Bureau recently issued a bulletin giving the results of its 1936 census of mental defectives and epileptics in institutions. According to this bulletin there were on December 31, 1936, 76,651 mentally defective patients in state institutions and 12,898 on parole or otherwise absent. The increase in resident patients during the year was 2,143. The new cases admitted to these institutions during the year 1936, numbered 7,656.

Epileptics are far less numerous than mental defectives. On December 31, 1936, there were 16,352 epileptic patients in institutions and 1,843 on parole. The increase during the year was 408. The new cases received in the institutions numbered 2,099.

Of the mentally defective first admissions, 47 per cent were morons, 31 per cent imbeciles, 15 per cent idiots and 7 per cent unclassified.

Of the epileptic first admissions, 28 per cent were classed as symptomatic, 61 per cent is idiopathic and 11 per cent as unclassified.

A total of 5,162 mental defective and epileptic patients were reported in city and private institutions on December 31, 1936. The number of each class of patients in these institutions was not specified.—Mental Hygiene News, Vol. VIII, No. 7, March, 1938, page 1.

EDITORIALS

"The first requisite to success in life is to be a good animal."
—Herbert Spencer.

The leading article in the issue of The Journal for this month discusses in some detail factors in school health service that are so apparent in most school systems that an investigator is astounded that those responsible for the "system" are not aware of its weaknesses and deficiencies. When it is found that those in charge are cognizant of the facts—as they often are—and that no real steps are being taken to improve conditions and procedures, one is appalled.

Constant study of our own efforts, and continuous research regarding activities and the results of activities are the price of progress. Eager readiness to study and to use new methods, willingness to discard the ineffective for the more effective, the desire to lead rather than merely to follow mark the progressive administrator.

What shall be the standard by means of which we judge the value of a school health service? Are we complacent and satisfied because each child is given an annual physical examination? Are we content with statistical testimony showing the number and percentage of physical defects found? Do we lull ourselves into inactivity because the records show a high percentage of correction of those defects?

How high is high? What is a good record of accomplishment in one community might be a poor one in a school system placed in an entirely different environment as regards education of parents, economic status, types of industry, quality and sufficiency of medical and clinical facilities.

Is not the amount of progress, advancement, and improvement the real measuring rod of effectiveness? We have available means of measurement, not only through the devices of experimentation, some of which are discussed by Dr. Nyswander, but by tests that are largely objective, that are easy to record, and that give a fixed record for comparison from year to year. One of these is the thirty-five page Illinois School-Health Appraisal Form, sponsored by the Illinois Congress of Parents and Teachers and by the Division of Child Hygiene of the State Department of Health. Another is the Appraisal Form for City Health Work, compiled by the Committee on Administrative Practice of the American Public Health Association, which devotes sixteen of its pages to School Hygiene.

Few factors in life stand still. Either they improve or they disintegrate. In which category falls the health service in our community? Is it advancing or retreating? Is any real effort being made to find out? Present day education seethes with checks upon its activities and progress. "Tests and measurements" have become an educational god. Those engaged in school health activities cannot gain the respect and fullest co-operation of teachers

and educational administrators, nor even of alert parents, unless they too test and measure their methods and results.

* * * * *

Perhaps in no field of school sanitation has there been as much progress during the last thirty years as in school room lighting.

It is a far cry from the average classroom of 1910, with its dark brown or dark green walls—painted this color because "it would not show the dirt" —its dark, light-absorbing floor, its gray "black" boards, its paint on walls and furniture throwing an eye fatiguing glare into the eyes of pupils and teachers, its windows, frequently grimy with dirt, usually so located that light shone through some of them directly into the eyes of teacher or children, and its dirty, dark brown or dark green opaque window shades, the drawing of which converted the classroom into a gloomy cave. It was not unusual to visit such a room on a bright sunny day and to find the shades tightly drawn because the window orientation was such that the sun otherwise would shine directly into the eyes of the children. To overcome the resulting gloom, artificial light was provided by means of a flickering "fishtail" gas jet.

Contrast these conditions with the standards set up in the article on Lighting in Sight-Saving Classrooms. Let us not get the idea that only the unfortunate with seriously impaired vision or with progressive eye defects needs such protection. Nearly all the regulations suggested there are quite as important for the safe and adequate lighting of any classroom.

In this field also, the health service has definite and crowding duties. Do its members know the efficiency of the lighting in classrooms, laboratories, and shops? Light measurement today is accurate and easy. The modern light meter is reasonable in price, and does not require great technical skill for its proper use.

The improvement in this field of school sanitation is gratifying. It proves that the world does move, although in the day to day picture we see little motion. All about us are evidences of progress in this phase of education. Not only in classroom lighting, but in heating and ventilating, in clean adequate toilet facilities, in playgrounds, gymnasiums, and other facilities for play and recreation, even in the provision for school cafeteria with controlled diets do we see great advances in the school health program. These have been possible, even though enormously expensive, largely because they are visible. It is easy to "sell" them to school administrators, Boards of Education, parents, and taxpayers.

The lag in progress has come in the less visible phases. It is hard to "see" the difference between poor and good physical examinations, between mere statistics keeping and actual removal of health destroying and educa-

tionally stagnating physical defects, between perfunctory and real service. It pays to advertise.

"Money makes the mare go," but service and salesmanship produce the money.

* * * * *

ABSTRACTS

Who Should Teach Dental Health?—Dr. C. Carroll Smith, Director of Dental Department, Peoria Public Schools, opened the GOOD TEETH Council's Forum. Dr. Smith said, "Talk to children in the language of their readers. I often found when I thought I was very simple I was most profound. Study the school work-book. Know school literature. Acquire teachers' language and attitude . . . Teachers resent anyone coming in without normal training . . . Enlist teacher's interest to help you put across your program . . . For younger children, keep only beautiful concepts before them. You can't create enthusiasm for dentistry, but you can get them dental conscious."

Dr. F. C. Cady, Dental Consultant, U. S. Public Health Service, said, "Although in some places follow-up work is done by the teacher, my study of the situation shows this to be expensive and time-consuming . . . As I understand it, the follow-up program is for obtaining as large a proportion of corrections as possible. Our study shows follow-up essential but also poorly done . . . In my opinion, if you handle a well grounded Health Education Program in your schools, there will be minimum follow-up for maximum corrections."

Miss Abbie M. Buck, Director, Child Health Education Service, Maine Public Health Association, was of the opinion that there should be the same importance attached to Dental Education as to physical education, or reading, or writing. Miss Buck knows the demands on a teacher . . . She has been teacher and supervisor . . . and she recommends outside agency help, with teacher co-operation. She stresses the fact that all health material and talks be presented to make everything as easy and interesting as possible for the teacher to pass on to the pupil.

Dr. J. M. Wisan, Lecturer on Education, New York University, felt there was need for Dental Health Education courses in teacher-training institutions. Extension courses for teachers would be ineffectual if the subject were not taught by a person who could make it vitally interesting.

Dr. Don W. Gudakunst, Deputy Commission of Health and Director of School Health Service, Detroit,* spoke most sympathetically of the teacher's over-crowded program. "She cannot come to us as teacher, minister, physician, dentist." He likewise feels that all the time shouldn't be spent "pounding after the poor school child and teacher" as Dental Health Education would not be amiss for dentists, physicians, parents, and health officers.

*Recently appointed Health Commissioner of the State of Michigan.

Dr. Howard B. Mettel, Director, Bureau of Maternal and Child Health, Indiana State Board of Health, spoke for Dr. Mary H. Westfall, in charge of the Dental Education Program. He said that they have interested the University of Indiana in the teaching of nuns and public school teachers for their state dental work.

Dr. R. C. Dalgleish, Director, Division of Dental Health, Utah State Board of Health, was in accord with Dr. Mettel in believing teacher training helpful. His experience with dentists is, as a rule, that they fall down miserably, in school talks, due to the fact that they cannot get down to the child's level. He doubts if any dentist, with the exception of the great teacher-dentist, Dr. Smith, could successfully handle this problem, saying that it belongs to the teacher, who must be trained in dental health education.

Miss Florence Hale, Editor, The Grade Teacher, said she is inclined to agree with Dr. Dalgleish in principle, but having been a teacher, a supervisor of teachers, and now an editor of a teacher's publication, she is all too well aware of the teacher's load. Miss Hale suggests the teacher's part in a Dental Health Program be to create right spirit in classroom and to work up the atmosphere—and whoever goes into a school ask him to be sure to put his message interestingly.

The discussion was concluded by Chairman Millberry summing up the quite uniform agreement that dentists as a whole are unqualified to carry on follow-up work in the schools, and that teachers are better but over-crowded and not trained in Dental Health. Therefore, at this time the health worker or hygienist who can speak the language of teacher and pupil and can tell the dental story interestingly, is the one to direct the follow-up program.—GOOD TEETH, Council for Children, Inc., Special Edition, 5th Annual Convention, September 23-25, 1937.

* * * * *

School Nurses.— For the convenience of employers of school nurses, the "Functions in Public Health Nursing" and "Minimum Qualifications for Those Appointed to Positions in Public Health Nursing" prepared by the National Organization for Public Health Nursing are here excerpted and stated in brief form.

Functions in School Nursing

The public health nurse in the school carries on the following functions:

1. Participates in formulating and developing a health education program based on the needs of the pupils.

2. Assists physicians in the examination of pupils and the interpretation of findings to teachers, parents, and children.

3. Teaches the value of adequate health supervision and facilities for medical and nursing care and assists in securing corrections of defects.

4. Encourages and instructs teachers, parents, and pupils to observe and recognize deviations from normal health.

5. Assists in the control of communicable diseases through teaching the recognition of early symptoms, the importance of isolation, and the value of immunization.

6. Contributes to the maintenance of a healthful school environment —physical, emotional, and social.

7. Arranges for the care of emergencies and minor injuries and illnesses in accordance with procedures having medical approval.

8. Participates in a program for the prevention of handicaps and the care and education of handicapped children.

9. Develops relationships to co-ordinate school nursing activities with all other health forces of school, home, and community and to promote community health resources.

10. Participates in curriculum making. Nurses who are qualified may instruct classes in principles of healthful living and care of the sick.

Minimum Qualifications for Nurses Appointed to School Nursing Positions

1. For the nurse in a school system or health department which provides supervision by a nurse who meets the qualifications set forth under III below:

Preparation:

a. General education—Graduation from an accredited high school is essential, and more advanced education on a college level is desirable.

b. Professional preparation:

1. Fundamental nursing education. The following are essential:

(a) Graduation from a school of nursing accredited by the state board of nurse examiners and connected with a hospital having a daily average of 100 patients.

(b) Instruction and experience in the care of men, women, and children, including patients with communicable diseases.

2. Instruction and experience are desirable in the following:

(a) Out-patient clinics.

(b) Psychiatric nursing.

(c) Public health nursing under a nurse supervisor who meets the qualifications set forth under III below.

c. Registration for the current year under the nurse practice law of the state.

d. Personal qualifications.

The following personal qualifications are of the utmost importance for a school nurse: an interest in and ability to work with children and adults; good physical health and emotional stability; initiative; good judgment; resourcefulness.

II. For the nurse in a school system or health department working without the guidance of a supervisor who meets the qualifications set forth under III below.

Preparation—All of the qualifications for a nurse working with supervision (See I above), and in addition the following:

a. Professional preparation.

Special preparation in public health nursing.

1. At least one academic year of study in public health nursing in one of the colleges whose program in public health nursing is approved by the National Organization for Public Health Nursing.

2. At least one year's experience under qualified nursing supervision in a public health nursing service in which family health service is emphasized. It is highly desirable that this experience include school nursing.

b. Personal qualifications—Ability in organizing the school nursing service in a community, and a special aptitude for working with lay and professional groups.

III. Supervisory positions.

Supervisor—Since the supervisor of school nursing usually carries in addition to the usual supervisory duties the responsibility for the educational program for both new and old staff members, and often for the field experience of undergraduate and post-graduate students, she should have the qualifications for both supervisory and educational work.

Preparation—All of the qualifications for a nurse working with and without supervision as set forth in I and II above, and in addition the following.

a. Professional preparation:

1. A college degree, including courses in education, is essential.
2. Preparation in the theory and practice of supervision is desirable.
3. At least two years' experience under qualified nursing supervision in a public health nursing service.

b. Personal qualifications:

In addition to the qualifications listed for other school nursing positions, the supervisor particularly needs to have executive and teaching ability, and also vision and imagination in relation to the development of the program and to the potentialities of the individual nurse.—Public Health Nursing, February, 1938, Pp. 108-109.

The Assessment of Nutrition in School Children.*—This article deals with the danger of pronouncing a child adequately nourished on the basis of the child's apparent physical condition. To say a child is normal, he must be normal and not just average. The author defines "normal" as the highest attainable standard.

He shows that three distinct items can be assessed: (1) The *objective physical condition* of the child, including adequacy of growth, anatomical normality, and organic soundness; (2) The degrees of *functional well-being;* and (3) The adequacy of the *nutritional process* as operating at the time of assessment.

Objective physical condition is capable of fairly accurate assessment in some respects, though the adequacy of growth in height and weight must remain a matter of conjecture in the absence of knowledge of the individual's potentialities of growth, and of standards based on optimal nutritional conditions during the whole life period.

Functional well-being is incapable of accurate or complete assessment without keeping the individual under intimate and prolonged observation. For practical purposes, an approximate estimate may be made from a critical history of the child's general well-being, minor ailments, illnesses, etc., especially if this is supplemented by specific functional tests—assuming that a satisfactory set of such tests can be devised.

Indications from the evidence of objective physical condition and functional well-being are often quite contradictory of each other. This is due to differences in dates of origin, and to the fact that function is generally safeguarded at the expense of growth and physique.

Nutritional process cannot be assessed without a detailed inquiry into the diet habits and environment of the child. An estimate of financial adequacy is easy, and has direct bearing on the question. Tests now being devised for specific nutritional deficiencies offer a valuable check on inquiry into dietetic adequacy. Future progress in nutrition assessment lies in the application of these tests to representative groups of children and correlation of the results with other findings.

A child's present degree of well-being may be *apparently* good, while nourishment taken can be proved to be poor. Present degree of well-being may be defective as a result of damage due to poor nutrition in the past, so may have little relation to nutrition as operating at the time of assessment. Since the degree of well-being and objective physical condition are the result of the sum total of nutritional influences, both prenatal and postnatal, the evidence from well-being and physical condition cannot be entirely relied on as an indication of *present* nutritional adequacy.

The term "nutritional state" can only mean the state of the body, physical, functional, or both; this is the resultant of the sum total of nutritional influences during the whole life of the child up to the time of assessment. It certainly is not the same thing as nutrition operating at any particular period. From the viewpoint of current administration, the assessment of "nutritional state"' as I have defined it, is most important as a comprehensive measure of the physique and well-being of the community.

Unless the distinctions between the three or four conceptions or aspects of nutrition are kept clearly in mind, nothing worthy of the name "nutrition assessment" can be made. Until there is general agreement as to *what* we are to assess, we can expect no uniformity in the results obtained by different medical officers. We must know what we are trying to assess and the degree of reliability of various types of evidence. We must weigh *all* the evidence. We certainly cannot assess nutrition while taking no account of nutriment.—The Health Officer, U. S. Public Health Service, February, 1938, Pp. 518-519.—*Wilkins, E. H., Asst. School Medical Officer, Birmingham. *The Medical Officer* (London), 58:14, 145-148 (Oct. 2, 1937).

* * * * *

Diphtheria.— With sixty-six out of the 102 counties in the state reporting no deaths from diphtheria during 1937, mortality from this disease reached a new low in down-state Illinois. There were only 64 deaths, according to preliminary figures, in the state exclusive of Chicago. The lowest previous record was 79, the figure for 1936 and 111 in 1933.

Even with this striking improvement, the experience in Illinois is somewhat less favorable than in some other states. Vermont, for example, had no death reported in that entire state in 1936, more recent records being unavailable now. Rhode Island had only one death in 1936. Fourteen states, including Connecticut, New Jersey, New York, Massachusetts, Minnesota and Wisconsin, had rates of less than 1 death per 100,000 population against an Illinois down-state rate of 1.8 in 1936. The down state rate last year in Illinois was 1.5.

The principal difficulty in Illinois appears to be a lack of persistent local efforts in the control of diphtheria. At one time or another, considerable proportions of the susceptible population have been immunized against diphtheria in every county of the state. Many of these counties have no local public health organizations, however, so that inoculation is frequently neglected as time goes on. Thus an unprotected group of children grow up, and diphtheria appears again in the community.

Diphtheria can be eradicated only through constant attention to the inoculation of young children. Once immunity has been established generally in a community, the immunization annually of a number of young children equal to the number of births will keep diphtheria under control.

Voluntary organizations often undertake immunization programs with great success. Usually, however, they lack the resources and sustained leadership to keep the work going year in and year out. Experience has shown that a permanently established official public health organization is needed to maintain control over diphtheria and other preventable diseases.—Illinois Health Messenger, February 15, 1938, P. 15.

* * * * *

Measles.—Measles convalescent serum may be had at the cost of production from the Samuel Deutsch Serum Center at the Michael Reese Hospital in Chicago. Limited amounts of the serum are available for free distribution in several cities where bleeding clinics to obtain it have been held recently.

Convalescent serum may be used to advantage in the control of measles. Given in appropriate dosage at any time up to the fifth day after exposure, the serum will prevent measles in most cases. Given between the fifth and eighth day after exposure it usually modifies but does not prevent entirely an attack. Rosenau recommends a dosage of 5 cc. for children and 10 cc. for adults, injected intra-muscularly.

Immunity produced by convalescent serum is temporary, protecting only against the disease for only two or three weeks. A modified attack of measles, however, usually leaves the patient permanently immune after recovery. Many competent physicians favor the use of serum to modify rather than to prevent measles, unless there is some good reason why attempt at prevention is preferable. Since measles is frequently serious in young children, those under three years, the use of serum may be especially beneficial to them.

To make convalescent serum available, the State Department of Public Health has co-operated with local health officers and the Samuel Deutsch Serum Center in arranging bleeding clinics in several down-state communities. The Serum Center holds the clinics, paying $5.00 each to donors who are accepted. One-fifth of the serum is left in the communities where obtained. The remainder is retained by the Serum Center. Information as to where the convalescent serum is available locally may be had from the health officer.

Clinics have been scheduled recently at Alton, Elgin, Hillsboro, Kewanee, Peoria, Moline, Quincy and Springfield.—Illinois Health Messenger, February 15, 1938, P. 14.

* * * * *

Medical Gymnastics for Mentally Deficient Children.*— At the recent meeting of the Bucharest Pediatric Society, Dr. Calimanescu stated that, in the treatment of backward or mentally deficient children, medical gymnastics is useful as a prelude to physical education. The treatment must

of course be strictly individualized. Its effect is to develop the latent potentiality of the brain cells. Increase in muscular power goes hand in hand with progress of mental development and improvement in the child's sensory condition. The chief aims of medical gymnastics in cases of mentally deficient children are to aid in developing the efficiency of the motor, sensory and psychic elements of the cerebrospinal system, the sympathetic system, and generally to improve the constitution. The exercises are passive manipulations, mechanical shaking, and strong vibration applied over the brain and spinal cord, and local nerve friction. Auditory and visual stimulation is afforded by telling the child to perform or to imitate movements. Active and passive, or resisted, movement of the joints may be associated with other forms of treatment.—*Bucharest letter from regular correspondent; Journal, A. M. A., March 13, 1937, p. 901.

* * * * *

NOTES

Success in Public Health.—Only two cases of diphtheria have originated in Middleton, N. Y., during the last 12 years. There was no case of this disease or of typhoid fever or smallpox in the community in 1937. Among the citizens of that municipality, about 19,000, the death rate from tuberculosis in 1937 was only 31 per 100,000 population. The infant death rate was about 29 per 1,000 births.

There is no secret about how this excellent state of affairs came about. The relentless warfare directed by the health officer against diphtheria illustrates very well the character of the whole broad campaign of health protection. "For years," says Dr. H. J. Shelley, the health officer, "every Middleton birth has been followed up, and when the baby reached the age of six months the mother was urged to have him immunized by private physician or in the Health Department clinic. Every clue has been checked to find each new-in-town family with unprotected children."

The battle against tuberculosis, smallpox, typhoid fever, and other diseases has been prosecuted no less relentlessly, and with similar success. Lately the campaign against ill health has been expanded to embrace syphilis and pneumonia as major projects.

The community spends 70c per capita for public health service and apparently gets good returns on the money invested.—Illinois Health Messenger, February 15, 1938. P. 15.

* * * * *

Bibliography.—The following pamphlets are well worth careful reading by those engaged in the various types of school health activities:

"School Health Policies—A Preliminary Study of Group Opinions," published under the direction of the Joint Committee on Health Problems in

Education of the National Education Association and the American Medical Association, 1934-1935.

"Open Air Classrooms," published by the National Tuberculosis Association, 1937.

"Home and School Co-operation for the Health of School Children," 1937, published by the Office of Education, U. S. Department of Interior.

"Safety and Health of the School Child," Pamphlet No. 75; Office of Education, United States Department of the Interior.

"Student Health Services in Institutions of Higher Education," Bulletin, 1937, No. 7, Office of Education, United States Department of Interior.

* * * * *

Proceedings.—The book of proceedings of the Seventh Biennial Conference, Health Section, World Federation of Education Associations, held in Japan, August, 1937, is now available.

The 37 papers, prepared by representatives of 17 countries, deal with the broad phases of Health Education, Health Services, Physical Education, with particular emphasis on rural problems.

This 258-page report can be ordered for $1.00, including postage, from the Health Section Secretariat, World Federation of Education Associations, 200 Fifth Avenue, New York City.

* * * * *

MEETINGS

The American Association for Health and Physical Education, Atlanta, Georgia, April 20-23.

Western Branch, American Public Health Association, Portland, Oregon, June 6, 7, 8.

National Tuberculosis Association, Los Angeles, Calif., June 20-23.

The American School Health Association and the American Public Health Association, October 24-28, Kansas City, Missouri.

The Journal of School Health
is printed by
RAUCH & STOECKL PRINTING CO., INC.
Both units of our firm are now merged in our own modern building at
120-130 ELMWOOD AVE., BUFFALO, N. Y. (near Allen)
New equipment has been added and we are in a position to compete favorably for publications and general printing
Universities and organizations are invited to submit their printing problems